

Title (en)
PERSONAL ENVIRONMENT AIRFLOW CONTROLLER

Title (de)
VORRICHTUNG ZUR STEUERUNG DER LUFTSTRÖMUNG IM PERSÖNLICHEN UMFELD

Title (fr)
DISPOSITIF DE REGULATION D'ECOULEMENT D'AIR D'ENVIRONNEMENT PERSONNEL

Publication
EP 2021700 A4 20130320 (EN)

Application
EP 07719811 A 20070518

Priority
• CA 2007000889 W 20070518
• US 80106806 P 20060518

Abstract (en)
[origin: WO2007134443A1] The apparatus and method provide an airflow to a person or group of persons or a space such as within an airplane cabin or cockpit, operating in conjunction with an air supply which produces a high velocity air stream, such as an aircraft gasper (14). Existing systems may filter, purify and/or clean the air supplied to the occupant, and the air exiting the personal air outlet may be adjusted to a relatively high velocity. The narrow, high velocity stream of air forms a turbulent boundary layer, which tends to entrain potentially foul air from the surrounding region and directs it towards the passenger. The airflow from the apparatus and method may have reduced velocity and lower thermal and humidity gradient and may be treated to remove locally-originating contaminants. The apparatus includes a housing which receives a primary stream of air, such as from an aircraft gasper (14) or personal air outlet. A secondary inlet (17) into the housing admits ambient air into the housing interior. A mixing chamber (30) within the housing receives the primary air stream and captures its momentum to entrain ambient air entering the housing through the secondary inlet. The combined streams are discharged, typically towards an occupant of the cabin. The ambient air may be treated before or after it is entrained so as to remove or disable pathogens or other air contaminants including gases and particles, or the ambient air may be drawn from a source distant from sources of air contamination and/or undesirable thermal conditions.

IPC 8 full level
F24F 13/04 (2006.01); **B60H 1/34** (2006.01); **B60H 3/06** (2006.01); **B64D 13/00** (2006.01); **F24F 8/10** (2021.01); **F24F 13/06** (2006.01); **F24F 13/26** (2006.01); **F24F 13/28** (2006.01)

CPC (source: EP US)
B60H 3/0641 (2013.01 - EP US); **B64D 13/00** (2013.01 - EP US); **F24F 8/10** (2021.01 - EP US); **F24F 13/04** (2013.01 - EP US); **F24F 13/06** (2013.01 - EP US); **F24F 13/26** (2013.01 - EP US); **B64D 2013/003** (2013.01 - EP US)

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Designated contracting state (EPC)
DE ES FR GB

DOCDB simple family (publication)
WO 2007134443 A1 20071129; CA 2652431 A1 20071129; EP 2021700 A1 20090211; EP 2021700 A4 20130320; US 2009163131 A1 20090625

DOCDB simple family (application)
CA 2007000889 W 20070518; CA 2652431 A 20070518; EP 07719811 A 20070518; US 30127007 A 20070518